

Glossary

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| 4(d) Rule | Regulations adopted by the Secretary of Commerce that he/she deems necessary and advisable for the conservation of threatened species. For this document, the 4(d) Rule specifically means those regulations published by NMFS on July 10, 2000 for fourteen listed salmon ESUs. |
| Action area | See Puget Sound Action Area, below. |
| Adjudicated fishing rights | Fishing rights of federally-recognized Indian tribes that have been established pursuant to court decree. |
| Adverse impact | An impact that has a negative consequence. |
| Alleles | Location in the genetic material (DNA) where genetic traits are carried. The type and frequency of the alleles in a population constitutes the genetic diversity of the population. |
| Alternatives | Reasonable actions that fit the purpose and need for the Proposed Action. |
| Angler days | Trips by sport fishermen. |
| Annex | The detailed agreements that implement the principles of the Pacific Salmon Treaty. |
| Asymptote | A straight line approached by a given curve as one of the variables in the equation of the curve approaches infinity. |
| Authorized take | Take of a listed species defined in the ESA as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct” conducted in a manner approved by the federal agency with jurisdiction over that listed species; i.e., NMFS or USFWS. |
| Bag limit | The number of fish allowed to be harvested in recreational fisheries within a certain time frame, e.g., angler trip. It may also be measured relative to another species; e.g., two salmon, only one of which is a chinook. |
| Beneficial impact | An impact that has a positive consequence. |
| Blackmouth | Immature chinook salmon. |
| Brood year | The year in which returning salmon adults spawn or the year in which the parents of a group of fish of the same age spawned. |
| Bycatch | Unintentional capture of marine birds or mammals during fisheries using any of a variety of gear types. |
| Carcass biomass | The volume of spawning salmon, measured in this document by spawner abundance. |
| Ceremonial uses | Salmon is a traditional food of Puget Sound Native American tribes. Examples of ceremonies that require traditional meals, including salmon, are: winter ceremonials, naming ceremonies, giveaways and feasts, and funerals. |
| Cetaceans | Whales, dolphins, porpoise. |

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| Chinook-directed fisheries | Fisheries with the objective of harvesting chinook salmon. |
| Coded-wire tags | Minute, implanted tags in a portion of hatchery-reared salmon that reveal information about their origin. |
| Cohorts | Fish of a given age and stock at the beginning of a particular year of life. |
| Co-managers | Washington Department of Fish and Wildlife, and Puget Sound Treaty Tribes. |
| Commingle | To mix together. |
| Critical escapement threshold | A level of escapement below which extinction risk increases substantially. |
| Cumulative impact | The impact on the environment that would result from the incremental effects of the proposed action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (CEQ 1508.7). |
| Current-condition escapement threshold | The number of spawners that meet the productivity and capacity constraints of a given river system. |
| Depensatory mortality | Mortality that occurs at very low population abundance that has the affect of destabilizing or further destabilizing the population. |
| Depressed population | A population whose production is below expected levels based on available habitat and natural variations in survival rates, but above the level where permanent damage to the population is likely. |
| Direct effect | An effect that would be caused by the proposed action or alternatives and occur at the same time and place as the action. Direct effects typically arise from construction activities, and may also occur from operations associated with the proposed action or alternatives (40CFR 1508.8[a]). |
| Disproportionate effect | An incidence (or prevalence) of an effect, a risk of an effect, or likely exposure to environmental hazards that would potentially cause adverse effects on a minority and/or low income population that significantly exceeds that experienced by a comparable reference population – a form of effects analysis used in the Environmental Justice subsection (4.7). |
| Diurnal foraging | Daytime foraging. |
| Endangered species | The ESA defines a threatened species as “any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class <i>Insecta</i> determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man.” |
| Escapement | The number of spawning adult salmon that return to a particular geographic area. |
| Escapement floor | The number of spawning adult salmon for a population or management unit that harvest management actions are designed to meet or exceed. |

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| Escapement goal | A management objective expressed as the number of fish returning to natural or artificial (hatchery) spawning areas. |
| Escapement goal management | A harvest management strategy whereby fisheries are managed to achieve an escapement goal(s). |
| Estuarine habitat | Tidal flats and river mouths (like Padilla Bay and the mouth of the Nooksack River). |
| Exploitation | Harvest. |
| Exploitation rate | The total mortality in a fishery or aggregate of fisheries expressed as the proportion of the un-fished cohort removed by fishing. |
| Exploitation rate ceiling | The maximum exploitation rate allowed for a population or management unit. A ceiling differs from a target in that fisheries are not managed to achieve the ceiling, but generally to fall below it. |
| Ex-vessel value | The dollar value that commercial fishermen receive for their product once it leaves the fishing vessel. |
| Fecundity | Fertility. For salmon, fecundity is measured as the number of eggs produced per female. |
| Federal trust responsibility | Duties and responsibilities of the federal government to manage the property and natural resources of the Tribes for the benefit of the Tribes. |
| Federally-recognized tribes | Any Indian or Alaska Native tribe, band, nation, pueblo, village or community that the Secretary of the Interior acknowledges to exist as an Indian tribe. The Secretary of the Interior is required to publish an annual list of such tribes in the Federal Register (25 USC sections 479a and 479a-1). |
| Fingerlings | Actively-feeding juvenile salmon within river systems. |
| Fishing regime | The specific group of fishery actions/regulations that are taken to achieve fishery management objectives. |
| Fry | Newly-emerged salmon. |
| Genetic diversity | The variation in inherited traits. |
| Genetic integrity | Maintenance of unique genetic characteristics of a population. |
| Genome | The genetic material (DNA, chromosomes) contained in living cells. |
| Ghost net | Fishing nets, especially gillnets, that have been lost but continue to capture fish, marine birds, marine mammals and crabs. |
| Harvest | Fish killed as a result of encounters with fishing gear. |
| Harvest rate | Total fishing mortality in a fishery expressed as a proportion of the total fish abundance available (standing stock) in a given fishing area at the start of a time period. |
| Hatchery-origin fish | Fish whose parents spawned or were spawned in a hatchery. |
| Hatchery-spawning fish | Same as hatchery-origin fish. |

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| Healthy population | A population experiencing production levels consistent with its available habitat and within the natural variations in survival for the population. |
| Hood Canal region | For purposes of this analysis, the Hood Canal region includes Jefferson, Kitsap and Mason Counties, and the following river systems: Skokomish, Hamma Hamma, Dosewallips, Duckabush, Big Quilcene, and Little Quilcene. |
| Hook-and-line fishery | Fisheries that use hook-and-line gear, e.g., troll and sport fisheries, to catch fish. |
| Hook-ups | The occurrence of catching marine birds in hook-and-line sport fisheries. |
| Incidental catch | Fish captured during a fishery targeted at another species. |
| Incidental take | Accidental harm or death caused to a threatened or endangered species during a fishery targeted at another species. |
| Indicator populations | Hatchery produced salmon that are marked with coded-wire tags and are used to represent associated wild spawning populations. |
| Indirect effect | Reasonably foreseeable effects that would be caused by the proposed action or alternatives, but which would occur later in time or further removed from the project site or action area than direct effects. Indirect effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the lead agency believes the effect will be beneficial. Indirect effects may be growth-inducing or otherwise related to changes in land use patterns, population density, or growth rate, and may affect air quality, water, and/or other natural systems (40CFR 1508.8[b]). |
| Inland marine deeper water habitat | Marine waters of Puget Sound greater than 66 feet deep. |
| Listed species | Species listed under the Endangered Species Act as threatened or endangered. |
| Low effect | Measurable but of small amount or occurs infrequently. |
| Marine Catch Areas | Geographic areas in marine and freshwaters defined for the purposes of reporting catch. |
| Marine-derived nutrients | The input of nutrients into freshwater systems associated with the return, death and decomposition of adult salmon. |
| Management unit | A population or group of populations aggregated for the purpose of achieving a management objective. |
| Marine shelf habitat | Deepwater habitat of the Strait of Juan de Fuca west of a line from the mouth of the Elwha River north to Race Rocks on the southern tip of Vancouver Island, influenced by oceanic currents. |
| Mesocosm | Communities in the middle or community structure that transitions from one layer to another, e.g., rock-insect-fish. |
| Moderate effect | Measurable at some level between low and substantial. |
| Morphology | The form and structure of an organism. |

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| Morphological | Pertaining to the form and structure of an organism. |
| Mortality | Number or amount of salmon killed. |
| Natal stream | Stream of origin. |
| Natural escapement | The number of fish spawning in the wild regardless of whether their parents spawned in the wild or in a hatchery. |
| Naturally-spawning | Spawning in the wild. |
| Nearshore marine habitat | Marine areas of Puget Sound between high tide and the end of the photic zone (66 feet depth). |
| Net economic value to commercial fishermen | The amount of total revenues received by vessel operators less the costs of production, including wages, operational expenses (like fuel and equipment), and fixed costs (such as insurance and depreciation). |
| Net economic value for sport anglers | The amount anglers would be willing to pay over and above what they actually pay is the measure of net economic value (or the value received) to anglers. |
| No effect | Not measurable and/or expected, or of such a rare occurrence that it is impossible to measure or detect. |
| North Hood Canal | The Economic Activity analysis of this Environmental Assessment addresses North Hood Canal (Jefferson County) and Clallam County in a subregion identified as Strait of Juan de Fuca/North Hood Canal. |
| North Puget Sound region | For purposes of this analysis, the North Puget Sound region includes Snohomish, Skagit, Whatcom, Island and San Juan Counties, and the following river systems: Nooksack, Samish, Skagit, Stillaguamish, and Snohomish. |
| Nutrient loading | The nutrients released into a system proportional to carcass density. |
| Otoliths | Bones in the head of a fish that indicate age. |
| Out-of-watershed-origin chinook | Chinook originating from a watershed other than that in which they are found, or chinook originating from a watershed other than that under discussion. |
| Population areal unit | The geopolitical unit used for purposes of the Environmental Justice analysis. Contains the populations used to define the target area: by county. |
| Precocious | Age-2 fish. |
| Productivity of systems | The survival rate of a population from a particular watershed from one life stage to another measured after taking into consideration mortality occurring during that period, e.g., juveniles produced per spawning adult. |
| Progeny | Offspring of spawning salmon. |
| Proposed Action | The Puget Sound chinook harvest management framework proposed by the Washington Department of Fish and Wildlife and the Puget Sound Treaty Tribes (co-managers). |

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| Puget Sound Action Area | All marine waters of the State of Washington east of, and including, the Strait of Juan de Fuca; all State of Washington freshwater tributaries to these marine waters east of the Strait of Juan de Fuca; the freshwater tributaries of the Strait of Juan de Fuca east of, and including, the Elwha River drainage; and the counties that border these waters. |
| Pulsed openings | Fishery openings scheduled for short duration. These openings are generally scheduled throughout the period over which salmon move through an area so that harvest is not focused on any one segment of the run. |
| Rebuilding exploitation rate | A harvest objective used by NMFS that defines the level of salmon fishery exploitation that would result in a low probability that the harvest action will endanger the population, and a relatively high probability that it will not impede recovery. |
| Recovery exploitation rate | A harvest objective used by the co-managers that defines the level of salmon fishery exploitation that would result in a low probability that the harvest action will endanger the population, and a relatively high probability that it will not impede recovery. |
| Recruits | The number of salmon in an the unfished cohort produced from a single brood year (parental escapement). |
| Redds | “Nests” constructed by salmon in gravel. |
| Redd superimposition | A phenomena that occurs when later arriving adult spawners spawn in the same places as earlier arriving adult spawners, in effect, digging up redds dug by previous spawners. This generally causes significant mortality to the eggs laid by the previous spawners. |
| Reference area | For purposes of the Environmental Justice analysis in this Environmental Assessment, the reference area is the State of Washington. |
| Resource management plan | A plan that includes a process, specific regulations, management objectives or other information required to manage a natural resource. For this document, the natural resource would be salmon. |
| Run timing | The time over which a population or group of populations move through or into an area, e.g., the time over which adults return to the spawning grounds. |
| Salmonids | All fishes belonging to the taxonomic family <i>Salmonidae</i> ; i.e., salmon and trout. |
| Smolts | Actively-feeding juvenile salmon, physiologically ready to migrate to salt water. |
| Smolting | Transitional life stage of juvenile salmon at the point where they move from fresh water to salt water; may occur in a river or within an estuary. |
| South Hood Canal | The Economic Activity analysis of this Environmental Assessment addresses South Hood Canal (Mason and Kitsap counties) and South Puget Sound (King, Pierce and Thurston counties) in a subregion identified as South Puget Sound/South Hood Canal. |

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| South Puget Sound region | For purposes of this analysis, the South Puget Sound region includes King, Pierce, and Thurston Counties, and the following river systems: Cedar, Green/Duwamish, Puyallup, Nisqually, Deschutes, and Shelton. |
| Southern U.S. fisheries | Chinook salmon fisheries occurring in Puget Sound and off the Pacific coast of Washington, Oregon and California. |
| Spawner density | The number of spawning salmon per area of spawning habitat. |
| Spawning escapement | The number of sexually-mature adults returning to spawning grounds. |
| Strait of Juan de Fuca region | For purposes of this analysis, the Strait of Juan de Fuca region includes Clallam County and the following river systems: Elwha and Dungeness. |
| Stratum | Sampling groups. |
| Straying | The occurrence of some hatchery-origin fish failing to return to the hatchery at the time of spawning. |
| Straying rate | The proportion of total hatchery-origin escapement not removed from the natural environment through trapping, or the number of hatchery-origin salmon that otherwise strayed from their point of release. |
| Subsistence uses | The ways in which indigenous people utilize the environment and the resources it provides (such as salmon) to meet the nutritional needs of the members of the society. |
| Substantial effect | A high impact that is measurable and/or expected, or likely to occur more frequently than anticipated. |
| Sub-yearlings | Juvenile salmonids that migrate as fingerlings. |
| Take | The ESA defines take as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any wildlife species listed as endangered, without written authorization. |
| Take prohibition | Ban of take. |
| Target area | The geographical study area for purposes of the Environmental Justice analysis; synonymous with the Puget Sound Action Area in this case. |
| Target population | The potentially affected residents of each county within the target area. |
| Terminal areas | Locations containing only populations that return to a single river system. |
| Terminal fisheries | Freshwater fisheries only; i.e., within rivers and lakes. |
| Terminal net fisheries | Freshwater fisheries that use net fishing gear; e.g., drift gill nets, set gill nets, beach seines, dip nets. |
| Threatened species | The ESA defines a threatened species as “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” |
| Transport vectors | Stream flow, stream channel structure, and similar factors. |
| Unlisted species | Species that have not been listed under the Endangered Species Act as threatened or endangered |

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| Usual and accustomed fishing areas | Traditional Indian fishing grounds so designated through judicial process. Defined in the Boldt Decision (383 Federal Supplement 312: 313) as every fishing location where members of an Indian tribe customarily fished from time to time at and before treaty times, however distant the then-usual habitat of the tribe, and whether or not other tribes then also fished in the same waters. |
| U.S. v. Washington | Commonly referred to as “The Boldt decision”, U.S. v Washington is the on-going Federal court proceeding that enforces and implements reserved treaty fishing rights with regard to salmon and steelhead returning to Western Washington. |
| Viable escapement threshold | A level of escapement that would generally indicate recovery or a point beyond which ESA protection is no longer required. |
| Viable Salmonid Population guidelines | Generic values or descriptive guidelines for abundance, productivity, spatial structure and diversity provided by NMFS in Viable Salmonid Populations and the Recovery of Evolutionarily Significant Units (McElhany et al., 2000) used as one factor in assessing the status of population where population-specific information is not available. |
| Wild exploitation rate | The total mortality in a fishery or aggregate of fisheries expressed as the proportion of the un-fished cohort whose parents spawned the wild that are removed by fishing. |
| Wild-origin fish | Fish whose parents spawned in the wild |
| Yearlings | Juvenile salmon that have reared at least one year in freshwater |